039 b.

SPRUCE MOUNTAIN WIND, LLC
Site Location of Development Act//Natural Resources Protection Act
Spruce Mountain Wind Project

STATUTORY REFERENCES & OTHER RULINGS

- Excerpts from Chapter 661, "An Act to Implement Recommendations of the Governor's Task Force on Wind Power Development"
- Excerpts from Site Law Rules
- Excerpts from Site Law Permit Application
- Excerpts from Chapter 335: Significant Wildlife Habitat Rules
- Excerpts from Chapter 500: Stormwater Management Rules

040 b.

Sec. A-7. 35-A MRSA c. 34-A is enacted to read:

CHAPTER 34-A

EXPEDITED PERMITTING OF GRID-SCALE WIND ENERGY DEVELOPMENT

§ 3451. Definitions

As used in this chapter, unless the context otherwise indicates, the following terms have the following meanings.

1. **Associated facilities.** "Associated facilities" means elements of a wind energy development other than its generating facilities that are necessary to the proper operation and maintenance of the wind energy development, including but not limited to buildings, access roads, generator lead lines and substations.

2. **Department.** "Department" means the Department of Environmental Protection.

3. **Expedited permitting area.** "Expedited permitting area" means:

A. The organized areas of the State in their entirety, but not including waters subject to tidal influence, so that the edge of the area that is subject to tidal action during the highest tide level for the year in which an activity is proposed as identified in tide tables published by the United States Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service defines the boundary of the expedited permitting area on lands abutting waters subject to tidal influence; and

B. Specific places within the State's unorganized and deorganized areas, as defined by Title 12, section 682, subsection 1, that are identified by rule by the Maine Land Use Regulation Commission in accordance with this chapter.

4. **Expedited wind energy development.** "Expedited wind energy development" means a grid-scale wind energy development that is proposed for location within an expedited permitting area.

5. **Generating facilities.** "Generating facilities" means wind turbines and towers and transmission lines, not including generator lead lines, that are immediately associated with the wind turbines.

6. **Grid-scale wind energy development.** "Grid-scale wind energy development" means a wind energy development that is of a size that would qualify as a development of state or regional significance that may substantially affect the environment as defined under Title 38, section 482, subsection 2, paragraph A or paragraph C.

7. **Host community.** "Host community" means a municipality, township or plantation in which the generating facilities of an expedited wind energy development are located.

8. **Primary siting authority.** "Primary siting authority" means:

A. The department, in the case of an expedited wind energy development subject to the department's jurisdiction pursuant to Title 38, chapter 3, subchapter 1, article 6, including, but not limited to, a development subject to the department's jurisdiction pursuant to Title 38, section 488, subsection 9; or

B. The Maine Land Use Regulation Commission, in the case of an expedited wind energy development subject to the Maine Land Use Regulation Commission's jurisdiction pursuant to Title 12, chapter 206-A.

9. Scenic resource of state or national significance. "Scenic resource of state or national significance" means an area or place owned by the public or to which the public has a legal right of access that is:

A. A national natural landmark, federally designated wilderness area or other comparable outstanding natural and cultural feature, such as the Orono Bog or Meddybemps Heath;

B. A property listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, as amended, including, but not limited to, the Rockland Breakwater Light and Fort Knox;

C. A national or state park;

D. A great pond that is:

(1) One of the 66 great ponds located in the State's organized area identified as having outstanding or significant scenic quality in the "Maine's Finest Lakes" study published by the Executive Department, State Planning Office in October 1989; or

(2) One of the 280 great ponds in the State's unorganized or deorganized areas designated as outstanding or significant from a scenic perspective in the "Maine Wildlands Lakes Assessment" published by the Maine Land Use Regulation Commission in June 1987;

E. A segment of a scenic river or stream identified as having unique or outstanding scenic attributes listed in Appendix G of the "Maine Rivers Study" published by the Department of Conservation in 1982;

F. A scenic viewpoint located on state public reserved land or on a trail that is used exclusively for pedestrian use, such as the Appalachian Trail, that the Department of Conservation designates by rule adopted in accordance with section 3457;

G. A scenic turnout constructed by the Department of Transportation pursuant to Title 23, section 954 on a public road that has been designated by the Commissioner of Transportation pursuant to Title 23, section 4206, subsection 1, paragraph G as a scenic highway; or

H. Scenic viewpoints located in the coastal area, as defined by Title 38, section 1802, subsection 1, that are ranked as having state or national significance in terms of scenic quality in:

042 b.

(1) One of the scenic inventories prepared for and published by the Executive Department, State Planning Office: "Method for Coastal Scenic Landscape Assessment with Field Results for Kittery to Scarborough and Cape Elizabeth to South Thomaston," Dominie, et al., October 1987; "Scenic Inventory Mainland Sites of Penobscot Bay," Dewan and Associates, et al., August 1990; or "Scenic Inventory: Islesboro, Vinalhaven, North Haven and Associated Offshore Islands," Dewan and Associates, June 1992; or

(2) A scenic inventory developed by or prepared for the Executive Department, State Planning Office in accordance with section 3457.

10. Tangible benefits. "Tangible benefits" means environmental or economic improvements attributable to the construction, operation and maintenance of an expedited wind energy development, including but not limited to: construction-related employment; local purchase of materials; employment in operations and maintenance; reduced property taxes; reduced electrical rates; natural resource conservation; performance of construction, operations and maintenance activities by trained, qualified and licensed workers in accordance with Title 32, chapter 17 and other applicable laws; or other comparable benefits, with particular attention to assurance of such benefits to the host community to the extent practicable and affected neighboring communities.

11. Wind energy development. "Wind energy development" means a development that uses a windmill or wind turbine to convert wind energy to electrical energy for sale or use by a person other than the generator. A wind energy development includes generating facilities and associated facilities.

§ 3452. Determination of effect on scenic character and related existing uses

1. Application of standard. In making findings regarding the effect of an expedited wind energy development on scenic character and existing uses related to scenic character pursuant to Title 12, section 685-B, subsection 4 or Title 38, section 484, subsection 3 or section 480-D, the primary siting authority shall determine, in the manner provided in subsection 3, whether the development significantly compromises views from a scenic resource of state or national significance such that the development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character of the scenic resource of state or national significance. Except as otherwise provided in subsection 2, determination that a wind energy development fits harmoniously into the existing natural environment in terms of potential effects on scenic character and existing uses related to scenic character is not required for approval under either Title 12, section 685-B, subsection 4, paragraph C or Title 38, section 484, subsection 3.

2. Exception; certain associated facilities. The primary siting authority shall evaluate the effect of associated facilities of a wind energy development in terms of potential effects on scenic character and existing uses related to scenic character in accordance with Title 12, section 685-B, subsection 4, paragraph C or Title 38, section 484, subsection 3, in the manner provided for development other than wind energy development, if the primary siting authority determines that application of the standard in subsection 1 to the development may result in unreasonable adverse effects due to the scope, scale, location or other characteristics of the associated facilities. An interested party may submit

information regarding this determination to the primary siting authority for its consideration. The primary siting authority shall make a determination pursuant to this subsection within 30 days of its acceptance of the application as complete for processing.

3. **Evaluation criteria.** In making its determination pursuant to subsection 1, and in determining whether an applicant for an expedited wind energy development must provide a visual impact assessment in accordance with subsection 4, the primary siting authority shall consider:

A. The significance of the potentially affected scenic resource of state or national significance;

B. The existing character of the surrounding area;

C. The expectations of the typical viewer;

D. The expedited wind energy development's purpose and the context of the proposed activity;

E. The extent, nature and duration of potentially affected public uses of the scenic resource of state or national significance and the potential effect of the generating facilities' presence on the public's continued use and enjoyment of the scenic resource of state or national significance; and

F. The scope and scale of the potential effect of views of the generating facilities on the scenic resource of state or national significance, including but not limited to issues related to the number and extent of turbines visible from the scenic resource of state or national significance, the distance from the scenic resource of state or national significance and the effect of prominent features of the development on the landscape.

A finding by the primary siting authority that the development's generating facilities are a highly visible feature in the landscape is not a solely sufficient basis for determination that an expedited wind energy project has an unreasonable adverse effect on the scenic character and existing uses related to scenic character of a scenic resource of state or national significance. In making its determination under subsection 1, the primary siting authority shall consider insignificant the effects of portions of the development's generating facilities located more than 8 miles, measured horizontally, from a scenic resource of state or national significance.

4. **Visual impact assessment; rebuttable presumption.** An applicant for an expedited wind energy development shall provide the primary siting authority with a visual impact assessment of the development that addresses the evaluation criteria in subsection 3 if the primary siting authority determines such an assessment is necessary in accordance with subsection 3. There is a rebuttable presumption that a visual impact assessment is not required for those portions of the development's generating facilities that are located more than 3 miles, measured horizontally, from a scenic resource of state or national significance. The primary siting authority may require a visual impact assessment for portions of the development's generating facilities located more than 3 miles and up to 8 miles from a scenic resource of state or national significance if it finds there is substantial evidence that a visual impact assessment is needed to determine if there is the potential for significant adverse effects on the scenic resource of state or national significance. Information intended to rebut the presumption must be submitted to the primary siting authority by any interested person within 30 days of acceptance of the application as complete for processing. The primary siting authority shall determine if the presumption is rebutted based on a preponderance of evidence in the record.

044 b.

In making a determination under this subsection regarding an expedited wind energy development, as defined in Title 35-A, section 3451, subsection 4, the department shall consider the development's effects on scenic character and existing uses related to scenic character in accordance with Title 35-A, section 3452.

Sec. B-11. 38 MRSA §484, sub-§3, ¶G is enacted to read:

G. In making a determination under this subsection regarding an expedited wind energy development, as defined in Title 35-A, section 3451, subsection 4, the department shall consider the development's effects on scenic character and existing uses related to scenic character in accordance with Title 35-A, section 3452.

Sec. B-12. 38 MRSA §484, sub-§10 is enacted to read:

10. Special provisions; grid-scale wind energy development. In the case of a grid-scale wind energy development, the proposed generating facilities, as defined in Title 35-A, section 3451, subsection 5:

A. Will be designed and sited to avoid unreasonable adverse shadow flicker effects;

B. Will be constructed with setbacks adequate to protect public safety. In making a finding pursuant to this paragraph, the department shall consider the recommendation of a professional, licensed civil engineer as well as any applicable setback recommended by a manufacturer of the generating facilities; and

C. Will provide significant tangible benefits as determined pursuant to Title 35-A, section 3454, if the development is an expedited wind energy development.

The Department of Labor, the Executive Department, State Planning Office and the Public Utilities Commission shall provide review comments if requested by the primary siting authority.

For purposes of this subsection, "grid-scale wind energy development," "primary siting authority," "significant tangible benefits" and "expedited wind energy development" have the same meanings as in Title 35-A, section 3451.

Sec. B-13. Submission requirements. No later than September 1, 2008, the Department of Environmental Protection and the Maine Land Use Regulation Commission shall, jointly and to the extent not already addressed in existing agency guidance, specify the submission requirements for the following matters for applications for wind energy development, including, but not limited to, expedited wind energy development as defined in the Maine Revised Statutes, Title 35-A, section 3451, subsection 4, in accordance with the recommendations of the February 2008 final report of the Governor's Task Force on Wind Power Development in Maine created by Executive Order issued on May 8, 2007, and the provisions of this Act, as applicable:

1. Effects on scenic character and existing uses related to scenic character;

2. Tangible benefits, including postconstruction reporting of tangible benefits realized;

3. Noise and shadow flicker effects;

4. Effects on avian and bat species;

5. Public safety-related setbacks; and

6. Decommissioning plans, including demonstration of current and future financial capacity that would be unaffected by the applicant's future financial condition to fully fund any necessary decommissioning costs commensurate with the project's scale, location and other relevant considerations, including, but not limited to, those associated with site restoration and turbine removal.

Implementation of this section does not require rulemaking under Title 5, chapter 375.

PART C

Sec. C-1. 12 MRSA §685-A, sub-§13 is enacted to read:

13. **Additions to expedited permitting area for wind energy development.** The commission may add areas in the State's unorganized and deorganized areas to the expedited permitting area for wind energy development in accordance with Title 35-A, section 3453.

Sec. C-2. 12 MRSA §685-B, sub-§2-C is enacted to read:

2-C. **Expedited wind energy development; determination deadline.** The commission shall consider any wind energy development in the expedited permitting area under Title 35-A, chapter 34-A a use requiring a permit, but not a special exception, within the affected districts or subdistricts and shall render its determination on an application for such a development within 185 days after the commission determines that the application is complete, except that the commission shall render such a decision within 270 days if it holds a hearing on the application. The chair of the Public Utilities Commission or the chair's designee shall serve as a nonvoting member of the commission and may participate fully but is not required to attend hearings when the commission considers an application for an expedited wind energy development as defined in Title 35-A, section 3451. The chair's participation on the commission pursuant to this subsection does not affect the ability of the Public Utilities Commission to submit information into the record of the commission's proceedings.

Sec. C-3. 12 MRSA §685-B, sub-§4, as amended by PL 2005, c. 452, Pt. A, §1, is further amended to read:

4. Criteria for approval. In approving applications submitted to it pursuant to this section, the commission may impose such reasonable terms and conditions as the commission may ~~deem~~consider appropriate.

The commission ~~shall~~may not approve ~~no~~an application, unless:

A. Adequate technical and financial provision has been made for complying with the requirements of the State's air and water pollution control and other environmental laws, and those standards and regulations adopted with respect thereto, including without limitation the minimum lot size laws, sections 4807 to 4807-G, the site location of development laws; Title 38, sections 481 to 490, and the natural resource protection laws, Title 38, sections 480-A to 480-Z, and adequate provision has been made for solid waste and sewage disposal, for controlling of offensive odors and for the securing and maintenance of sufficient healthful water supplies;

046 b.

way, culverts, catch basins or other means of channeling surface water within the development and over adjacent parcels of land.

(2) Deed covenants which establish the easements or rights-of-way and provide for their continued maintenance.

C. **Terms and Conditions.** The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that there will by no unreasonable alteration of natural drainage ways.

4. **No Unreasonable Effect on Runoff/Infiltration Relationships**

A. **Preamble.** The Board recognizes that same developments cause unreasonable increases in stormwater runoff by decreasing the infiltrative capacity of the soils on a development site. The Board also recognizes that increases in stormwater runoff cause increased danger of flooding, the pollution of surface water bodies, and the depletion of groundwater resources.

B. **Scope of Review.** In determining whether the proposed development will have an unreasonable effect on runoff/infiltration relationships, the Board shall consider all relevant evidence to that effect, such as evidence that:

(1) A stormwater management system will infiltrate, detain, or retain water falling on the site during a storm of an intensity equal to a twenty-five year, twenty-four hour storm such that the rate of flow of stormwater from the development does not exceed the rate of outflow of stormwater from the site prior to the undertaking of the development.

(a) Developments which convey stormwater directly into the ocean (excluding estuarine tidewaters) exclusively in manmade piped or open drainage systems are exempt from the requirements of this subsection.

(2) The physical, biological, and chemical properties of the receiving waters will not be unreasonably degraded by the stormwater runoff from the development site.

(3) The peak discharge of the receiving waters will not be increased as the result of the stormwater runoff from the development site for storms up to a level of intensity of a twenty-five year, twenty-four hour storm.

C. **Submissions.** Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable effect on runoff/infiltration relationships, including information such as the following, when appropriate:

(1) Evidence that the proposed stormwater management system has been designed by a professional engineer or other person duly qualified to undertake the design. The designer of the system will evaluate the effectiveness of various stormwater methods and develop and make available for review the hydraulic computations based on accepted engineering practices to demonstrate that the standards established under subsection B, above, will be met.

(2) Evidence that the stormwater management system will take into consideration the upstream runoff which must pass over or through the development site. The system will be designed to pass upstream flows generated by a twenty-five year frequency through the proposed development without overloading the system or flooding areas not specifically planned for such flooding.

(3) Evidence that the design of piped or open channel systems will be based on a ten year flow frequency without overloading or flooding beyond channel limits. In addition, the areas expected to be flooded by runoff of a twenty-five year frequency will be designated, and no structures will be planned within such area.

(4) Evidence that, where permanent embankment-type storage or retention basins are planned, the basins will be designed in accordance with good engineering practice, such as outlined in the Soil Conservation Service Engineering Field Manual or other appropriate references.

(5) Evidence that rights-of-way or easements will be designated for all components of the stormwater management system lying outside of established street lines.

(6) Evidence that the developer will maintain all components of the stormwater management system until it is formally accepted by the municipality or a quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. The charter of such an association must be acceptable to the Board.

(7) Evidence that the stormwater management system will be fully coordinated with project site plans, including consideration of street patterns, pedestrian ways, open space, building siting, parking areas, recreational facilities, and other utilities, especially sanitary wastewater disposal facilities.

(8) When the construction of a development is to occur in phases, the planning of the stormwater management system should encompass the entire site which may ultimately be developed, and not limited to an initial or limited phases of the development.

NOTE: The following references may be of assistance to a developer in making the necessary computations and in designing the stormwater management system:

"Urban Hydrology for Small Watersheds", Technical Release No. 55, USDA, Soil Conservation Service, University of Maine, Orono, Maine.

"Water Resources Protection Measures in Land Development - A Handbook", Tourbier and Westmacott, University of Delaware Water Resources Center, Newark, Delaware.

D. Terms and Conditions. The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that there will be no unreasonable effect on runoff/infiltration relationships.

5. Erosion and Sedimentation Control

2a

A. **Preamble.** The Board recognizes that the construction, operation and maintenance of developments may cause excessive noise that could degrade the health and welfare of nearby neighbors. It is the intent of the Board to require adequate provision for the control of excessive environmental noise from developments proposed after the effective date of this regulation.

B. **Applicability**

(1) This regulation applies to proposed developments within municipalities without a local quantifiable noise standard and in unorganized areas of the State. When a proposed development is located in a municipality which has duly enacted by ordinance an applicable quantifiable noise standard, which (1) contains limits that are not higher than the sound level limits contained in this regulation by more than 5 dBA, and (2) limits or addresses the various types of noises contained in this regulation or all the types of noises generated by the development, that local standard, rather than this regulation, shall be applied by the Board within that municipality for each of the types of sounds the ordinance regulates. This regulation applies to developments located within one municipality when the noise produced by the development is received in another municipality and, in these cases, the Board will also take into consideration the municipalities' quantifiable noise standards, if any.

(2) This regulation applies to expansions and modifications of developments when such expansions and modifications are proposed after the effective date of this regulation and subject to site location approval, but only to the noise produced by the proposed expansion or modification of the development, unless (1) the existing development was constructed since 1-1-70 and (2) at the time of construction, the existing development was too small to require site location approval. In situations where conditions (1) and (2) above apply, then this regulation applies to the whole development (both existing facility and proposed expansion or modification). This regulation also applies to expansions and modifications of existing developments when such expansions and modifications require an amendment to the development's Site Law permit, but only to the noise produced by the expansion or modification.

(3) This regulation does not apply to existing developments or portions of existing developments constructed prior to 1-1-70 or approved under the Site Law prior to the effective date of this regulation. This regulation does not apply to relicensing of existing solid waste facilities previously approved under the Site Law.

(4) The sound level limits contained in this regulation apply only to areas that are defined as protected locations, and to property lines of the proposed development or contiguous property owned by the developer, whichever are farther from the proposed development's regulated sound sources.

(5) The sound level limits contained in this regulation do not apply to noise received within the development boundary.

NOTE: The Board will reconsider the effect and operation of the regulation one year from its effective date.

C. **Sound Level Limits**

(1) Sound From Routine Operation of Developments.

(a) Except as noted in subsections (b) and (c) below, the hourly sound levels resulting from routine operation of the development and measured in accordance with the measurement procedures described in subsection H shall not exceed the following limits:

(i) At any property line of the development or contiguous property owned by the developer, whichever is farther from the proposed development's regulated sound sources:

75 dBA at any time of day.

(ii) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial;

60 dBA between 7:00 a.m. and 7:00 p.m.
(the "daytime hourly limit"), and
50 dBA between 7:00 p.m. and 7:00 a.m.
(the "nighttime hourly limit").

(iii) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

70 dBA between 7:00 a.m. and 7:00 p.m.
(the "daytime hourly limit"), and
60 dBA between 7:00 p.m. and 7:00 a.m.
(the 'nighttime hourly limit').

(iv) For the purpose of determining whether the use of an unzoned area is predominantly commercial, transportation, or industrial (e.g. non-residential in nature), the Department shall consider the municipality's comprehensive plan, if any. Furthermore, the usage of properties abutting each protected location shall be determined, and the limits applied for that protected location shall be based upon the usage occurring along the greater portion of the perimeter of that parcel; in the event the portions of the perimeter are equal in usage, the limits applied for that protected location shall be those for a protected location in an area for which the use is not predominantly commercial, transportation, or industrial.

(v) When a proposed development is to be located in an area where the daytime pre-development ambient hourly sound level at a protected location is equal to or less than 45 dBA and/or the nighttime pre-development ambient hourly sound level at a protected location is equal to or less than 35 dBA, the hourly sound levels resulting from routine operation of the development and measured in accordance with the measurement procedures described in subsection H shall not exceed the following limits at that protected location:

55 dBA between 7:00 a.m. and 7:00 p.m.

(the "daytime hourly limit"), and
45 dBA between 7:00 p.m. and 7:00 a.m.
(the "nighttime hourly limit").

For the purpose of determining whether a protected location has a daytime or nighttime pre-development ambient hourly sound level equal to or less than 45 dBA or 35 dBA, respectively, the developer may make sound level measurements in accordance with the procedures in subsection H or may estimate the sound-level based upon the population density and proximity to local highways. If the resident population within a circle of 3,000 feet radius around a protected location is greater than 300 persons, or the hourly sound level from highway traffic at a protected location is predicted to be greater than 45 dBA in the daytime or 35 dBA at night (as appropriate for the anticipated operating schedule of the development), then the developer may ,estimate the daytime or nighttime pre-development ambient hourly sound level to be greater than 45 dBA or 35 dBA, respectively.

NOTE: Highway traffic noise can be predicted using the nomograph method of FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978.

(vi) Notwithstanding the above, the developer need not measure or estimate the pre-development ambient hourly sound levels at a protected location if he demonstrates, by estimate or example, that the hourly sound levels resulting from routine operation of the development will not exceed 50 dBA in the daytime or 40 dBA at night.

(b) If the developer chooses to demonstrate by measurement that the daytime and/or nighttime pre-development ambient sound environment at any protected location near the development site exceeds the daytime and/or nighttime limits in subsection 1(a)(ii) or 1(a)(iii) by at least 5 dBA, then the daytime and/or nighttime limits shall be 5 dBA less than the measured daytime and/or nighttime pre-development ambient hourly sound level at the location of the measurement for the corresponding time period.

(c) For any protected location near an existing development, the hourly sound level limit for routine operation of the existing development and all future expansions of that development shall be the applicable hourly sound level limit of 1(a) or l(b) above, or, at the developer's election, the existing hourly sound level from routine operation of the existing development plus 3 dBA.

(d) For the purposes of determining compliance with the above sound level limits, 5 dBA shall be added to the observed levels of any tonal sounds that result from routine operation of the development.

(e) When routine operation of a development produces short duration repetitive sound, the following limits shall apply:

(i) For short duration repetitive sounds, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the

development for the purposes of determining compliance with the above sound level limits.

(ii) For short duration repetitive sounds resulting from scrap metal, drop forge and metal fabrication operations or developments which the Board determines, due to their character and/or duration, are particularly annoying or pose a threat to the health and welfare of nearby neighbors, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the development for the purposes of determining compliance with the above sound level limits, and the maximum sound level of the short duration repetitive sounds shall not exceed the following limits:

(a) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial:

65 dBA between 7:00 a.m. and 7:00 p.m., and
55 dBA between 7:00 p.m. and 7:00 a.m.

(b) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

75 dBA between 7:00 a.m. and 7:00 p.m., and
65 dBA between 7:00 p.m. and 7:00 a.m.

(c) The methodology described in subsection 1(a)(iv) shall be used to determine whether the use of an unzoned area is predominantly commercial, transportation, or industrial.

(d) If the developer chooses to demonstrate by measurement that the pre-development ambient hourly sound level at any protected location near the development site exceeds 60 dBA between 7:00 a.m. and 7:00 p.m., and/or 50 dBA between 7:00 p.m. and 7:00 a.m., then the maximum sound level limit for short duration repetitive sound shall be 5 dBA greater than the measured pre-development ambient hourly sound level at the location of the measurement for the corresponding time period.

(e) For any protected location near an existing development, the maximum sound level limit for short duration repetitive sound resulting from routine operation of the existing development and all future expansions and modifications of that development shall be the applicable maximum sound level limit of (e)(ii)(a) or (e)(ii)(b) above, or, at the developer's election, the existing maximum sound level of the short duration repetitive sound resulting from routine operation of the existing development plus 3 dBA.

NOTE: The maximum sound level of the short duration repetitive sound shall be measured using the fast response [L_{AFmax}]. See the definition of maximum sound level.

(2) Sound From Construction of Developments

(a) The sound from construction activities between 7:00 p.m. and 7:00 a.m. is subject to the following limits:

(i) Sound from nighttime construction activities shall be subject to the nighttime routine operation sound level limits contained in subsections 1(a) and 1(b).

(ii) If construction activities are conducted concurrently with routine operation, then the combined total of construction and routine operation sound shall be subject to the nighttime routine operation sound level limits contained in subsections 1(a) and 1(b).

(iii) Higher levels of nighttime construction sound are permitted when a duly issued permit authorizing nighttime construction sound in excess of these limits has been granted by:

1. the local municipality when the duration of the nighttime construction activity is less than or equal to 90 days,

2. the local municipality and the Board when the duration of the nighttime construction activity is greater than 90 days.

(b) Sound from construction activities between 7:00 a.m. and 7:00 p.m. shall not exceed the following limits at any protected location:

Duration of Activity	Hourly Sound Level Limit
12 hours	87 dBA
8 hours	90 dBA
6 hours	92 dBA
4 hours	95 dBA
3 hours	97 dBA
2 hours	100 dBA
1 hour or less	105 dBA

(c) All equipment used in construction on development sites shall comply with applicable federal noise regulations and shall include environmental noise control devices in proper working condition, as originally provided with the equipment by its manufacturer.

(3) Sound From Maintenance Activities

(a) Sound from routine, ongoing maintenance activities shall be considered part of the routine operation of the development and the combined total of the routine maintenance and operation sound shall be subject to the routine operation sound level limits contained in subsection 1.

(b) Sound from occasional, major, scheduled overhaul activities shall be subject to the construction sound level limits contained in subsection 2. If overhaul activities are conducted concurrently with routine operation and/or construction activities, the combined total of the overhaul, routine operation and construction sound shall be subject to the construction sound level limits contained in subsection 2.

(4) Sound From Production Blasting

Sound exceeding the limits of subsection 1 and resulting from production blasting at a mine or quarry shall be limited as follows:

(a) Blasting shall not occur in the period between sundown and sunrise the following day or in the period between the hours of 7:00 p.m. and 7:00 a.m., whichever is greater. In addition, no routine production blasting shall be allowed in the daytime on Sundays.

(b) Blasting shall not occur more frequently than four times per day.

(c) Sound from blasting shall not exceed the following limits at any protected location:

Number of Blasts Per Day	Sound Level Limit
1	129 dBL
2	126 dBL
3	124 dBL
4	123 dBL.

Blast sound shall be measured in peak linear sound level (dBL) with a linear response down to 5 Hz.

NOTE: See Bureau of Mines Report of Investigations 8485 for information on airblast sound levels and pertinent scaled distances.

(5) Exemptions

Sound associated with the following shall be exempt from regulation by the Board:

(a) Railroad equipment which is subject to federal noise regulations.

(b) Aircraft operations which are subject to federal noise regulations.

(c) Registered and inspected vehicles:

(i) while operating on public ways, or
(ii) which enter the development to make a delivery or pickup and which are moving, starting or stopping, but not when they are parked for over 60 minutes in the development.

(d) Watercraft while underway.

(e) Residential developments, except during construction of such developments.

(f) Bells, chimes and carillons.

(g) occasional sporting, cultural, religious or public events allowed by the local municipality where the only affected protected locations are contained within that municipality.

(h) The unamplified human voice and other sounds of natural origin.

(i) Firming, fishing and aquacultural activity.

(j) Forest management, harvesting and transportation activities.

(k) Making, maintaining and grooming snow where the only affected protected locations are contained within the general boundaries of a ski area development.

(l) Snow removal, landscaping and street sweeping activities.

(m) Emergency maintenance and repairs.

(n) Warning signals and alarms.

(o) Safety and protective devices installed in accordance with code requirements.

(p) Test operations of emergency equipment occurring in the daytime and no more frequently than once per week.

(q) Boiler start-up, testing and maintenance operations occurring no more frequently than once per month.

(r) Major concrete pours that must extend after 7:00 p.m., when started before 3:00 p.m.

(s) Sounds from a regulated development received at a protected location when the generator of the sound has been conveyed a noise easement for that location. This exemption shall only be for the specific noise, land and term covered by the easement.

(t) A force majeure event and other causes not reasonably within the control of the owners or operators of the development.

(6) Noise Abatement Structures.

Noise abatement structures of a non-permanent nature in any one location for a duration of less than one year and erected for the sole purpose of noise control shall not be considered structures as defined in 38 MRSA subsection 482(6).

D. Submissions

(1) Developments with Minor Sound Impact.

An applicant for a proposed development with minor sound impact may choose to file as part of the site location application a statement attesting to the minor nature of the anticipated sound impact of their development. An applicant proposing an expansion or modification of an existing development with minor sound impact may follow the same procedure as described above. For the purpose of this regulation, a development or an expansion or modification of an existing development with minor sound impact means a development where the developer demonstrates, by estimate or example, that the regulated sound from routine operation of the development will not exceed 5 dBA less than the applicable limits

established under subsection C. It is the intent of this subsection that an applicant need not conduct sound level measurements to demonstrate that the development or an expansion or modification of an existing development will have a minor sound impact.

NOTE: Examples include subdivisions without structures, office buildings, storage buildings which will not normally be accessed at night, and golf courses.

(2) Other Developments

Technical information shall be submitted describing the applicant's plan and intent to make adequate provision for the control of sound. The applicant's plan shall contain information such as the following, when appropriate:

(a) Maps and descriptions of the land uses, local zoning and comprehensive plans for the area potentially affected by sounds from the development.

(b) A description of major sound sources, including tonal sound sources and sources of short duration repetitive sounds, associated with the construction, operation and maintenance of the proposed development, including their locations within the proposed development.

(c) A description of the daytime and nighttime hourly sound levels and, for short duration repetitive sounds, the maximum sound levels expected to be produced by these sound sources at protected locations near the proposed development.

(d) A description of the protected locations near the proposed development.

(e) A description of proposed major sound control measures, including their locations and expected performance.

(f) A comparison of the expected sound levels from the proposed development with the sound level limits of this regulation.

(g) A comparison of the expected sound levels from the proposed development with any quantifiable noise standards of the municipality in which the proposed development will be located and of any municipality which may be affected by the noise.

E. Terms and Conditions

The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that the developer has made adequate provision for the control of noise from the development and to reduce the impact of noise on protected locations. Such conditions may include, but are not limited to, enclosing equipment or operations, imposing limits on hours of operation, or requiring the employment of specific design technologies, site design, modes of operation, or traffic patterns.

The sound level limits prescribed in this regulation shall not preclude the Board under Chapter 375.15 from requiring a developer to demonstrate that sound levels from a development will not unreasonably disturb wildlife or adversely affect wildlife populations. In addition, the sound level limits shall not preclude the Board, as a term or condition of approval, from requiring that

lower sound level limits be met to ensure that the developer has made adequate provision for the protection of wildlife.

F. Variance From Sound Level Limits

The Board recognizes that there are certain developments or activities associated with development for which noise control measures are not reasonably available. Therefore, the Board or Commissioner may grant a variance from any of the sound level limits contained in this rule upon (1) a showing by the applicant that he or she has made a comprehensive assessment of the available technologies for the development and that the sound level limits cannot practicably be met with any of these available technologies, and (2) a finding by the Board that the proposed development will not have an unreasonable impact on protected locations. In addition, a variance may be granted by the Board or Commissioner if (1) a development is deemed necessary in the interest of national defense or public safety and the applicant has shown that the sound level limits cannot practicably be met without unduly limiting the development's intended function, and (2) a finding is made by the Board or Commissioner that the proposed development will not have an unreasonable impact on protected locations. The Board or Commissioner shall consider the request for a variance as part of the review of a completed Site Location of Development Law application. In granting a variance, the Board or Commissioner may, as a condition of approval, impose terms and conditions to ensure that no unreasonable sound impacts will occur.

G. Definitions

Terms used herein are defined below for the purpose of this noise regulation.

(1) AMBIENT SOUND: At a specified time, the all-encompassing sound associated with a given environment, being usually a composite of sounds from many sources at many directions, near and far, including the specific development of interest.

(2) CONSTRUCTION: Activity and operations associated with the development or expansion of a project or its site.

(3) EMERGENCY: An unforeseen combination of circumstances which calls for immediate action.

(4) EMERGENCY MAINTENANCE AND REPAIRS: Work done in response to an emergency.

(5) ENERGY SUM OF A SERIES OF LEVELS: Ten times the logarithm of the arithmetic sum of the antilogarithms of one-tenth of the levels. [Note: See Section H(4.2).]

(6) EXISTING DEVELOPMENT: A development constructed before 1-1-70 or a development approved under the Site Law prior to the effective date of this regulation or a proposed development for which the site location application is complete for processing on or before the effective date of this regulation. Any development with a site location approval which has been remanded to the Board by a court of competent jurisdiction for further proceedings relating to noise limits or noise levels prior to the effective date of these regulations shall not be deemed an existing development and these regulations shall apply to the existing noise sources at that development.

(7) EXISTING HOURLY SOUND LEVEL: The hourly sound level resulting from routine operation of an existing development prior to the first expansion that is subject to this regulation.

(8) EQUIVALENT SOUND LEVEL: The level of the mean-square A-weighted sound pressure during a stated time period, or equivalently the level of the sound exposure during a stated time period divided by the duration of the period.

NOTE: For convenience, a one hour equivalent sound level should begin approximately on the hour.

---

(9) HISTORIC AREAS: Historic sites administered by the Bureau of Parks and Recreation of the Maine Department of Conservation, with the exception of the Arnold Trail.

(10)HOURLY SOUND LEVEL: The equivalent sound level for one hour measured or computed in accordance with this regulation.

(11)LOCALLY-DESIGNATED PASSIVE RECREATION AREA: Any site or area designated by a municipality for passive recreation that is open and maintained for public use and which:

(a) has fixed boundaries,

(b) is owned in fee simple by a municipality or is accessible by virtue of public easement,

(c) is identified and described in a local comprehensive plan, and

(d) has been identified and designated at least nine months prior to the filing of the applicant's Site Location of Development application.

(12)MAXIMUM SOUND LEVEL: Ten times the common logarithm of the square of the ratio of the maximum sound to the reference sound of 20 micropascals. Symbol: L_{AFmax}.

(13)MAXIMUM SOUND: Largest A-weighted and fast exponential-time-weighted sound during a specified time interval. Unit: pascal (Pa).

(14)RESIDENCE: A building or structure, including manufactured housing, maintained for permanent or seasonal residential occupancy providing living, cooking and sleeping facilities and having permanent indoor or outdoor sanitary facilities, excluding recreational vehicles, tents and watercraft.

(15)PRE-DEVELOPMENT AMBIENT: The ambient sound at a specified location in the vicinity of a development site prior to the construction and operation of the proposed development or expansion.

(16)PROTECTED LOCATION: Any location, accessible by foot, on a parcel of land containing a residence or planned residence or approved residential subdivision, house of worship, academic school, college, library, duly licensed hospital or nursing home near the

development site at the time a Site Location of Development application is submitted; or any location within a State Park, Baxter State Park, National Park, Historic Area, a nature preserve owned by the Maine or National Audubon Society or the Maine Chapter of the Nature Conservancy, The Appalachian Trail, the Moosehorn National Wildlife Refuge, federally-designated wilderness area, state wilderness area designated by statute (such as the Allagash Wilderness Waterway), or locally-designated passive recreation area; or any location within consolidated public reserve lands designated by rule by the Bureau of Public Lands as a protected location.

At protected locations more than 500 feet from living and sleeping quarters within the above noted buildings or areas, the daytime hourly sound level limits shall apply regardless of the time of day.

Houses of worship, academic schools, libraries, State and National Parks without camping areas, Historic Areas, nature preserves, the Moosehorn National Wildlife Refuge, federally-designated wilderness areas without camping areas, state wilderness areas designated by statute without camping areas, and locally-designated passive recreation areas without camping areas are considered protected locations only during their regular hours of operation and the daytime hourly sound level limits shall apply regardless of the time of day.

Transient living accommodations are generally not considered protected locations; however, in certain special situations where it is determined by the Board that the health and welfare of the guests and/or the economic viability of the establishment will be unreasonably impacted, the Board may designate certain hotels, motels, campsites and duly licensed campgrounds as protected locations.

This term does not include buildings and structures located on leased camp lots, owned by the applicant, used for seasonal purposes.

For purposes of this definition, (1) a residence is considered planned when the owner of the parcel of land on which the residence is to be located has received all applicable building and land use permits and the time for beginning construction under such permits has not expired, and (2) a residential subdivision is considered approved when the developer has received all applicable land use permits for the subdivision and the time for beginning construction under such permits has not expired.

(17)QUANTIFIABLE NOISE STANDARD: A numerical limit governing noise from developments that has been duly enacted by ordinance by a local municipality.

(18)ROUTINE OPERATION: Regular and recurrent operation of regulated sound sources associated with the purpose of the development and operating on the development site.

(19)SHORT DURATION REPETITIVE SOUNDS: A sequence of repetitive sounds which occur more than once within an hour, each clearly discernible as an event and causing an increase in the sound level of at least 6 dBA on the fast meter response above the sound level observed immediately before and after the event, each typically less than ten seconds in duration, and which are inherent to the process or operation of the development and are foreseeable.

(20)SOUND COMPONENT: The measurable sound from an audibly identifiable source or group of sources.

(21)SOUND LEVEL: Ten times the common logarithm of the square of the ratio of the frequency-weighted and time-exponentially averaged sound pressure to the reference sound of 20 micropascals. For the purpose of this regulation, sound level measurements are obtained using the A-weighted frequency response and fast dynamic response of the measuring system, unless otherwise noted.

(22)SOUND PRESSURE: Root-mean-square of the instantaneous sound pressures in a stated frequency band and during a specified time interval. Unit: pascal (Pa).

(23)SOUND PRESSURE LEVEL: Ten times the common logarithm of the square of the ratio of the sound pressure to the reference sound pressure of 20 micropascals.

(24)TONAL SOUND: for the purpose of this regulation, a tonal sound exists if, at a protected location, the one-third octave band sound pressure level in the band containing the tonal sound exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies at or between 500 Hz and 10,000 Hz, by 8 dB for center frequencies at or between 160 and 400 Hz, and by 15 dB for center frequencies at or between 25 Hz and 125 Hz.

Additional acoustical terms used in work associated with this regulation shall be used in accordance with the following American National Standards Institute (ANSI) standards:

ANSI S12.9-1988 - American National Standard Quantities and Procedures for Description and Measurements of Environmental Sound, Part 1;

ANSI S3.20-1973 - American National Standard Psychoacoustical Terminology;

ANSI S1.1-1960 - American National Standard Acoustical Terminology.

H. Measurement Procedures

(1) Scope. These procedures specify measurement criteria and methodology for use, with applications, compliance testing and enforcement. They provide methods for measuring the ambient sound and the sound from routine operation of the development, and define the information to be reported. The same methods shall be used for measuring the sound of construction, maintenance and production blasting activities. For measurement of the sound of production blasting activities for comparison with the limits of subsection C(4)(c), these same methods shall be used with the substitution of the linear sound level for the A-weighted sound level.

(2) Measurement Criteria

2.1 Measurement Personnel

Measurements shall be supervised by personnel who are well qualified by training and experience in measurement and evaluation of environmental sound, or by personnel trained to operate under a specific measurement plan approved by the Board or Commissioner.

2.2 Measurement Instrumentation

(a) A sound level meter or alternative sound level measurement system used shall meet all of the Type 1 or 2 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4-1983.

(b) An integrating sound level meter (or measurement system) shall also meet the Type 1 or 2 performance requirements for integrating/averaging in the International Electrotechnical Commission Standard on Integrating-Averaging Sound Level Meters, IEC Publication 804 (1985).

(c) A filter for determining the existence of tonal sounds shall meet all the requirements of-American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11-1986 for Order 3, Type 3-D performance.

(d) An acoustical calibrator shall be used of a type recommended by the manufacturer of the sound level meter and that meets the requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40-1984.

(e) A microphone windscreen shall be used of a type recommended by the manufacturer of the sound level meter.

2.3 Calibration

(a) The sound level meter shall have been calibrated by a laboratory within 12 months of the measurement, and the microphone's response shall be traceable to the National Bureau of Standards.

(b) Field calibrations shall be recorded before and after each measurement period and at shorter intervals if recommended by the manufacturer.

2.4 Measurement Location, Configuration and Environment

(a) Except as noted in subsection (b) below, measurement locations shall be at nearby protected locations that are most likely affected by the sound from routine operation of the development.

(b) For determining compliance with the 75 dBA property line hourly sound level limit described in subsection C(l)(a)(i), measurement locations shall be selected at the property lines of the proposed development or contiguous property owned by the developer, as appropriate.

(c) The microphone shall be positioned at a height of approximately 4 to 5 feet above the ground, and oriented in accordance with the manufacturer's recommendations.

(d) Measurement locations should be selected so that no vertical reflective surface exceeding the microphone height is located within 30 feet. When this is not possible, the measurement location may be closer than 30 feet to the reflective surface, but under no circumstances shall it be closer than 6 feet.

(e) When possible, measurement locations should be at least 50 feet from any regulated sound source on the development.

(f) Measurement periods shall be avoided when the local wind speed exceeds 12 mph and/or precipitation would affect the measurement results.

2.5 Measurement Plans. Plans for measurement of pre-development ambient sound or post-development sound may be discussed with the Department staff.

(3) Measurement of Ambient Sound

3.1 Pre-Development Ambient Sound

Measurements of the pre-development ambient sound are required only when the developer elects to establish the sound level limit in accordance with subsections C(1)(b) and C(1)(e)(ii)(d) for a development in an area with high ambient sound levels, such as near highways, airports, or pre-existing developments; or when the developer elects to establish that the daytime and nighttime ambient hourly sound levels at representative protected locations exceed 45 dBA and 35 dBA, respectively.

(a) Measurements shall be made at representative protected locations for periods of time sufficient to adequately characterize the ambient sound. At a minimum, measurements shall be made on three different weekdays (Monday through Friday) during all hours that the development will operate. If the proposed development will operate on Saturdays and/or Sundays, measurements shall also be made during all hours that the development will operate.

(b) Measurement periods with particularly high ambient sounds, such as during holiday traffic activity, significant insect activity or high coastline waves, should generally be avoided.

(c) At any measurement location the daytime and nighttime ambient hourly sound level shall be computed by arithmetically averaging the daytime and nighttime values of the measured one hour equivalent sound levels. Multiple values, if they exist, for any specific hour on any specific day shall first be averaged before the computation described above.

3.2 Post-Development Ambient Sound

(a) Measurements of the post-development ambient one hour equivalent sound levels and, if short duration repetitive sounds are produced by the development, the maximum sound levels made at nearby protected locations and during representative routine operation of the development that are not greater than the applicable limits of subsection C clearly indicate compliance with those limits.

(b) Compliance with the limits of subsection C(1)(b) may also be demonstrated by showing that the post-development ambient hourly sound level, measured in accordance with the procedures of subsection 3.1 above during routine operation of the development, does not exceed the pre-development ambient hourly sound level by more than one decibel,

and that the sound from routine operation of the development is not characterized by either tonal sounds or short duration repetitive sounds.

(c) Compliance with the limits of subsection C(1)(e)(ii)(d) may also be demonstrated by showing that the post development maximum sound level of any short duration repetitive sound, measured in accordance with the procedures of subsection 3.1 above, during routine operation of the development, does not exceed the pre-development ambient hourly sound level by more than five decibels.

(d) .If any of the conditions in (a), (b) or (c) above are not met, compliance with respect to the applicable limits must be determined by measuring the sound from routine operation of the development in accordance with the procedures described in subsection 4.

(4) Measurement of the Sound from Routine Operation of Developments.

4.1 General

(a) Measurements of the sound from routine operation of developments are generally necessary only for specific compliance testing purposes in the event that community complaints result from operation of the development, for validation of an applicant's calculated sound levels when requested by the Board or Commissioner, for determination of existing hourly sound levels for an existing development or for enforcement by the Department.

(b) Measurements shall be obtained during representative weather conditions when the development sound is most clearly noticeable. Preferable weather conditions for sound measurements at distances greater than about 500 feet from the sound source include overcast days when the measurement location is downwind of the development and inversion periods (which most commonly occur at night).

(c) Measurements of the development sound shall be made so as to exclude the contribution of sound from development equipment that is exempt from this regulation.

4.2 Measurement of the Sound Levels Resulting from Routine Operation of the Development.

(a) When the ambient sound levels are greater than the sound level limits, additional measurements can be used to determine the hourly sound level that results from routine operation of the development. These additional measurements may include diagnostic measurements such as measurements made close to the development and extrapolated to the protected location, special checkmark measurement techniques that include the separate identification of audible sound sources, or the use of sound level meters with pause capabilities that allow the operator to exclude non-development sounds.

(b) For the purposes of computing the hourly sound level resulting from routine operation of the development, sample diagnostic measurements may be made to obtain the one hour equivalent sound levels for each sound component.

(c) Identification of tonal sounds produced by the routine operation of a development for the purpose of adding the 5 dBA penalty in accordance with subsection C(1)(d) requires

aural perception by the measurer, followed by use of one-third octave band spectrum analysis instrumentation. If one or more of the sounds of routine operation of the development are found to be tonal sounds, the hourly sound level component for tonal sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds.

(d) Identification of short duration repetitive sounds produced by routine operation of a development requires careful observations. For the sound to be classified as short duration repetitive sound, the source(s) must be inherent to the process or operation of the development and not the result of an unforeseeable occurrence. If one or more of the sounds of routine operation of the development are found to be short duration repetitive sounds, the hourly sound level component for short duration repetitive sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds. If required, the maximum sound levels of short duration repetitive sounds shall be measured using the fast response [L_{AFmax}]. The duration and the frequency of occurrence of the events shall also be measured. In some cases, the sound exposure levels of the events may be measured. The one hour equivalent sound level of a short duration repetitive sound may be determined from measurements of the maximum sound level during the events, the duration and frequency of occurrence of the events, and their sound exposure levels.

(e) The daytime or nighttime hourly sound level resulting from routine operation of a development is the energy sum of the hourly sound level components from the development, including appropriate penalties, (see (c) and (d) above). If the energy sum does not exceed the appropriate daytime or nighttime sound level limit, then the development is in compliance with that sound level limit at that protected location.

(5) Reporting Sound Measurement Data. The sound measurement data report should include the following:

(a) The dates, days of the week and hours of the day when measurements were made.

(b) The wind direction and speed, temperature, humidity and sky condition.

(c) Identification of all measurement equipment by make, model and serial number.

(d) The most recent dates of laboratory calibration of sound level measuring equipment.

(e) The dates, times and results of all field calibrations during the measurements.

(f) The applicable sound level limits, together with the appropriate hourly sound levels and the measurement data from which they were computed, including data relevant to either tonal or short duration repetitive sounds.

(g) A sketch of the site, not necessarily to scale, orienting the development, the measurement locations, topographic features and relevant distances, and containing sufficient information for another investigator to repeat the measurements under similar conditions.

(h) A description of the sound from the development and the existing environment by character and location.

(iii) Shade trees will be highcrowned species with ascending or lateral branching habit indigenous to the area, tolerant to existing soils and urbanized conditions, two-inch minimum caliper measured six inches up from the base, and planted a maximum of 30' on center.

(iv) Flowering and evergreen trees will be a minimum of 7' tall and planted a maximum of 20' on center.

(v) Selections for ground cover will reflect the project's function, expected foot traffic, exposure, and maintenance program.

(f) Provisions will be made to supply water to planted islands and other vegetated areas.

---

(4) The plans for the proposed development provide for the preservation of existing elements of the development site which contribute to the maintenance of scenic character.

C. **Submissions.** Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on the scenic character of the surrounding area, including information such as the following, when appropriate:

(1) Sketches of the proposed development indicating how the development fits into the scenic character of the area.

(2) Landscaping plans for minimizing the visual impact of the parking lots, mining operations and other types of developments.

D. **Terms and Conditions.** The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will have no unreasonable adverse effect on scenic character, such as requiring that:

(1) Illumination of the development be limited.

(2) Vegetative or architectural screens be established.

15. Protection of Wildlife and Fisheries

A. **Preamble.** The Board recognizes the need to protect wildlife and fisheries by maintaining suitable and sufficient habitat and the susceptibility of certain species to disruption and interference of lifecycles by construction activities.

B. **Scope of Review.** In determining whether the developer has made adequate provision for the protection of wildlife and fisheries, the Board shall consider all relevant evidence to that effect, such as evidence that:

(1) A buffer strip of sufficient area will be established to provide wildlife with travel lanes between areas of available habitat.

(2) Proposed alterations and activities will not adversely affect wildlife and fisheries lifecycles.

(3) There will be no unreasonable disturbance to:

(a) High and moderate value deer wintering areas;.

(b) Habitat of any species declared threatened or endangered by the Commissioner, Maine Department of Inland Fisheries and Wildlife or the Director of the U.S. Fish and Wildlife Service;

(c) Seabird nesting islands;

(d) Significant vernal pools;

(e) High and moderate value waterfowl and wading bird habitat; and

(f) Shorebird nesting, feeding, and staging areas.

C. **Submissions.** Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that the developer has made adequate provision for the protection of wildlife and fisheries, including information such as the following, when appropriate:

(1) The location of natural buffer strips and adequate provision for their maintenance.

(2) Plans to mitigate adverse effects on wildlife and fisheries through means that at a minimum include, but are not limited to, design considerations, pollution-abatement practices, the timing of construction activities, and on-site or off-site habitat improvements or preservation.

D. **Terms and Conditions.** The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that a developer has made adequate provision for the protection of wildlife and fisheries.

After public notice and public hearings held on June 14 and 15, 1979, the above regulations are hereby adopted this 8th day of August, 1979.

AUTHORITY: 38 M.R.S.A., Section 343

EFFECTIVE DATE: November 1, 1979
Section 10 Amended: November 21, 1989
Section 9 Amended: June 12, 1991
Section 9 Amended: September 22, 2001
Section 15 Amended: January 18, 2006

BASIS STATEMENT

These regulations are intended to explain and clarify the meaning of the No Adverse Environmental Effect Standard of the Site Location Law (38 M.R.S.A., Section 484(3)) and to set out the duties, powers,

2Da

[Supplemental Requirements for Wind Energy Developments Only]:

Section 26. Shadow flicker. Provide a detailed model of the wind energy development that demonstrates that the project has been designed to avoid unreasonable adverse shadow flicker effect. The shadow flicker model must utilize the WindPro software or other modeling software as approved by the department.

[Note: Shadow flicker caused by wind turbines is defined as alternating changes in light intensity caused by the moving blade casting shadows on the ground and stationary objects, such as a window at a dwelling. No flicker shadow will be cast when the sun is obscured by clouds/fog or when the turbine is not rotating. Shadow flicker is not the sun seen through a rotating wind turbine rotor nor what an individual might view moving through the shadows of a wind farm. The spatial relationships between a wind turbine and receptor, as well as wind direction are key factors related to shadow flicker duration. At distances of greater than 1,000 feet between wind turbines and receptors, shadow flicker usually only occurs at sunrise or sunset when the cast shadows are sufficiently long. For situations where the rotor plane is in-line with the sun and receptor (as seen from the receptor), the cast shadows will be very narrow (blade thickness), of low intensity, and will move quickly past the stationary receptor. When the rotor plane is perpendicular to the sun-receptor "view line", the cast shadow of the blades will move within a circle equal to the turbine rotor diameter.]

Section 27. Public Safety. Provide documentation in the form of a site plan and a certificate of design provided by the manufacturer of the generating facility that document that the proposed wind energy development has been designed to conform to applicable industry standards and that the proposed wind energy development will not present an unreasonable safety hazard to adjacent properties or adjacent property uses. Documentation provided by the applicant must include, but is not limited to, the following:

1. **Design Safety Certification:** Evidence that the turbine design meets acceptable safety standards; such evidence may include submission of certificates of design compliance obtained by the equipment manufacturers from Underwriters Laboratories, Det Norske Veritas, Germanishcer Lloyd Wind Energies, or other similar certifying organizations.
2. **Overspeed Control:** Evidence from the manufacturer or other licensed civil engineer describing the design and function of overspeed control (i.e. aerodynamic overspeed controls such as variable pitch and mechanical brakes) and related safety mechanisms that are part of the turbine design.
3. **Public Safety-related Setback:** Evidence that the wind turbines have been sited with appropriate safety related setbacks from adjacent properties and adjacent existing uses; such evidence shall include a site plan and applicable documentation as necessary to show that the proposed wind generation facility turbines have been sited in such a manner as to provide a minimum set back from the nearest property line. The recommended minimum setback is a distance of not less than the normal setback requirements for that zoning classification as dictated by the local municipal zoning ordinance or 1.5 times the maximum turbine blade height, whichever is greater. The setback distance must be measured to the center of the wind turbine base.

   The recommended minimal setbacks do not apply if the applicant has obtained a waiver of such setbacks from the affected landowner. Alternatively, the applicant may submit evidence (i.e. operating protocols, safety programs, recommendation of a licensed professional engineer with appropriate expertise and experience with wind turbines, or relevant manufacturer recommendations) that a reduced setback is appropriate.

Section 28. Tangible Benefits Provide a narrative description of the tangible benefits that the proposed wind energy development is expected to bring to the region, with particular attention to the benefits to the host community and the surrounding area.

[Note: "Tangible benefits" means environmental or economic improvements attributable to the construction, operation and maintenance of an expedited wind energy development, including but not limited to: construction-related employment; local purchase of materials; employment in operations and

maintenance; reduced property taxes; reduced electrical rates; natural resource conservation; performance of construction, operations and maintenance activities by trained, qualified and licensed workers in accordance with Title 32, chapter 17 and other applicable laws; or other comparable benefits, with particular attention to assurance of such benefits to the host community to the extent practicable and affected neighboring communities.]

Pursuant to 35-A MRSA § 3402 (1) an applicant may assume that the wind energy resources of the State constitute a valuable indigenous and renewable energy resource and that wind energy development, which is unique in its benefits to and impacts on the natural environment, makes a significant contribution to the general welfare of the citizens of the State for the following reasons:

1. Wind energy is an economically feasible, large-scale energy resource that does not rely on fossil fuel combustion or nuclear fission, thereby displacing electrical energy provided by these other sources and avoiding air pollution, waste disposal problems and hazards to human health from emissions, waste and by-products; consequently, wind energy development may address energy needs while making a significant contribution to achievement of the State's renewable energy and greenhouse gas reduction objectives, including those in Title 38, section 576; and

2. At present and increasingly in the future with anticipated technological advances that promise to increase the number of places in the State where grid-scale wind energy development is economically viable, and changes in the electrical power market that favor clean power sources, wind energy may be used to displace electrical power that is generated from fossil fuel combustion and thus reduce our citizens' dependence on imported oil and natural gas and improve environmental quality and state and regional energy security.

The applicant shall provide additional information, as necessary, to demonstrate that the proposed wind energy development provides tangible environmental or economic benefits that could be realized by the host community (town or county), or which would have broader benefits for the region or state.

Examples of activities that may constitute a tangible benefit include, but are not limited to:

- Natural resource conservation - Applicants are encouraged to consider the conservation of lands near or adjacent to the project site as evidence of tangible benefits. Lands near the project site, or with characteristics similar to the project site, are generally preferred.
- Direct job creation – An estimate of temporary and permanent jobs associated with construction and operation of the project, and a statement describing plans to hire Maine companies and/or to hire and train local residents.
- Direct economic benefits – An estimate of the direct economic benefits of the project including spending on goods and services.
- Indirect economic benefits – An estimate of the indirect economic benefits of the project resulting from construction and operation of the project.
- Recreation – A description of any plans for coordination with recreationalists for use of the land where the project would be located.

The demonstration of tangible benefits does not include projects being done for other required mitigation, such as for wetland impacts.

Section 29. Decommissioning Plan The applicant must provide a plan for decommissioning the project if that becomes necessary. The decommissioning plan shall include but is not limited to the following:

1. A description of the trigger for implementing the decommissioning plan. There is a rebuttable presumption that decommissioning is required if no electricity is generated for a continuous period of twelve (12) months. The applicant may rebut the presumption by providing evidence, such as a force majeure event that interrupts the generation of electricity, that although the project has not

22a

generated electricity for a continuous period of 12 months, the project has not been abandoned and should not be decommissioned.

2. A description of the work required to physically remove all wind turbines, associated foundations to a depth of 24 inches, buildings, cabling, electrical components, and any other associated facilities to the extent they are not otherwise in or proposed to be placed into productive use. All earth disturbed during decommissioning must be graded and re-seeded, unless the landowner of the affected land requests otherwise in writing.

   [Note: At the time of decommissioning, the applicant may provide evidence of plans for continued beneficial use of any or all of the components of the wind energy development. Any changes to the approved decommissioning plan shall be approved as a minor amendment to the department license for the wind energy development.]

3. An estimate of the total cost of decommissioning less salvage value of the equipment and itemization of the estimated major expenses, including the projected costs of measures taken to minimize or prevent adverse effects on the environment during implementation of the decommissioning plan. The itemization of major costs may include, but is not limited to, the cost of the following activities: turbine removal, turbine foundation removal and permanent stabilization, building removal and permanent stabilization, transmission corridor removal and permanent stabilization and road infrastructure removal and permanent stabilization.

4. Demonstration in the form of a performance bond, surety bond, letter of credit, parental guarantee or other form of financial assurance as may be acceptable to the department that upon the end of the useful life of the wind generation facility the applicant will have the necessary financial assurance in place for 100% of the total cost of decommissioning, less salvage value. The applicant may propose securing the necessary financial assurance in phases, as long as the total required financial assurance is in place a minimum of 5 years prior to the expected end of the useful life of the wind generation equipment.

✳ **Section 30. Generating facility-Visual Quality and Scenic Character** Provide an evaluation of the effect of the generating facility on scenic resources of state or national significance that are located within 3 miles of a turbine, unless the department determines that an evaluation is not required. In determining whether a visual impact assessment is required, the department shall consider the following:

- Significance of the affected scenic resource;
- Existing character of the surrounding area;
- Expectations of the typical viewer;
- Project purpose and context;
- Extent, nature, and duration of the potentially affected public uses of the scenic resource and the potential effect of the generating facility's presence on the publics' continued use and enjoyment of the scenic resource.
- Scope and scale of the potential effect of views of the generating facility on the scenic resources of state or national significance, including but not limited to issues related to the number and extent of turbines visible from the scenic resource, the distance from the scenic resource and the effect of prominent features of the development on the landscape.

[Note: The requirements of this section govern the visual and scenic impacts of the "generating facilities" and therefore the application requirements in "Section 6. Visual Quality and Scenic Character" do not apply to generating facilities. "Generating facilities" means wind turbines and towers and transmission lines, not including generator lead lines, that are immediately associated with the wind turbines. . The "associated facilities," which include elements of a wind power project other than its generating facilities, are subject to the requirements in Section 6 if the department concludes that reviewing them under this Section 30 would result in unreasonable adverse effects due to the scope, scale, location or other characteristics of the associated facilities. The department will make a determination on whether the

applicant must submit information on associated facilities consistent with the requirements of Section 6 or Section 30 within 30 days of when the application is accepted for processing.]

"Scenic resource of state or national significance" means an area or place owned by the public or to which the public has a legal right of access that is:

A. A national natural landmark, federally designated wilderness area or other comparable outstanding natural and cultural feature, such as the Orono Bog or Meddybemps Heath;
B. A property listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, as amended, including, but not limited to, the Rockland Breakwater Light and Fort Knox;
C. A national or state park;
D. A great pond that is:

   1. One of the 66 great ponds located in the State's organized area identified as having outstanding or significant scenic quality in the "Maine's Finest Lakes" study published by the Executive Department, State Planning Office in October 1989; or

   2. One of the 280 great ponds in the State's unorganized or deorganized areas designated as outstanding or significant from a scenic perspective in the "Maine Wildlands Lakes Assessment" published by the Maine Land Use Regulation Commission in June 1987;

E. A segment of a scenic river or stream identified as having unique or outstanding scenic attributes listed in Appendix G of the "Maine Rivers Study" published by the Department of Conservation in 1982;
F. A scenic viewpoint located on state public reserved land or on a trail that is used exclusively for pedestrian use, such as the Appalachian Trail, that the Department of Conservation designates by rule adopted in accordance with section 3457;
G. A scenic turnout constructed by the Department of Transportation pursuant to Title 23, section 954 on a public road that has been designated by the Commissioner of Transportation pursuant to Title 23, section 4206, subsection 1, paragraph G as a scenic highway; or
H. Scenic viewpoints located in the coastal area, as defined by Title 38, section 1802, subsection 1, that are ranked as having state or national significance in terms of scenic quality in:

   1. One of the scenic inventories prepared for and published by the Executive Department, State Planning Office: "Method for Coastal Scenic Landscape Assessment with Field Results for Kittery to Scarborough and Cape Elizabeth to South Thomaston," Dominie, et al., October 1987; "Scenic Inventory Mainland Sites of Penobscot Bay," Dewan and Associates, et al., August 1990; or "Scenic Inventory: Islesboro, Vinalhaven, North Haven and Associated Offshore Islands," Dewan and Associates, June 1992; or

   2. A scenic inventory developed by or prepared for the Executive Department, State Planning Office in accordance with section 3457.

In order to determine the effects on scenic character and existing uses related to scenic character, the visual impact assessment must include, but is not limited to:

- Locations and descriptions of scenic resources of state or national significance that are within 3 miles of the development area;
- The locations and descriptions of scenic resources of state or national significance between 3 and 8 miles of the development area, if the department finds there is substantial evidence that the pertinent resource is significant and there is a potential for a significant adverse effect.
- The effect of the project on the affected scenic resources of state or national significance with respect to the five criteria listed above and the standards set forth in 34-A MRSA Section 3452.

D. **Practicable.** Available and feasible considering cost, existing technology and logistics based on the overall purpose of the project.

E. **Subject wildlife.** Wildlife species for which an area has been designated as significant wildlife habitat.

3. **General standards applicable to all activities**

A. **Avoidance.** An activity that would degrade the significant wildlife habitat, disturb the subject wildlife, or affect the continued use of the significant wildlife habitat by the subject wildlife, either during or as a result of the activity, will be considered to have an unreasonable impact if there is a practicable alternative to the project that would be less damaging to the environment.

B. **Minimal alteration.** Alteration of the habitat and disturbance of subject wildlife must be kept to the minimum amount necessary by, among other methods, minimizing the size of the alteration, the duration of the activity, and its proximity to the significant wildlife habitat and subject wildlife. Temporary structures must be used instead of permanent structures wherever possible when they would be more protective of the significant wildlife habitat or subject wildlife.

C. **No unreasonable impact.** Even if the activity has no practicable alternative, and the applicant has minimized the proposed alteration as much as possible, the application will be denied if the activity will have an unreasonable impact on protected natural resources or the subject wildlife. "Unreasonable impact" means that one or more of the standards of the NRPA at 38 M.R.S.A. § 480-D will not be met. In making this determination, the department considers the area of the significant wildlife habitat affected by the activity, including areas beyond the physical boundaries of the project and the cumulative effects of frequent minor alterations of significant wildlife habitats.

In order to meet the "harm to habitats; fisheries" standard at 38 M.R.S.A. § 480-D(3), the following requirements must be met.

(1) Unreasonable degradation, disturbance, or effect. The activity may not unreasonably degrade the significant wildlife habitat, unreasonably disturb subject wildlife, or unreasonably affect the continued use of the site by the subject wildlife.

A specific impact may require mitigation on-site or within close proximity to the affected significant wildlife habitat in order to lessen the severity of the impact. For example, altering a portion of a shorebird feeding area that is providing critical habitat for migratory shorebirds will likely require mitigation on-site to ensure that potential effects of the proposed activity are reduced. Mitigation methods may include the implementation of a buffer enhancement plan, deed restriction or other methods as determined by the department.

(2) Timing. The department may require that construction activities occur during a time when impacts on protected habitats, wildlife, fisheries and aquatic life will be minimized, such as outside of any critical nesting or breeding periods or similar critical periods, depending on the specific habitat and species. For example, an activity that could potentially cause sedimentation, such as excavation, may not be carried out during times of the year when fish are spawning. This requirement must be met unless the work can only practically be

completed at that time, and it is determined by the department that the impacts to the protected natural resource will be short term, and will not result in permanent harm to fish, wildlife, or marine resources.

D. Compensation. Compensation is the off-setting of a lost habitat function with a function of equal or greater value. The goal of compensation is to achieve no net loss of habitat functions and values. Every case where compensation may be required is unique due to differences in habitat type and geographic location. For this reason, the method, location, and amount of compensation work necessary is variable.

(1) When required. Compensation is required when the department determines that an impact to significant wildlife habitat will cause habitat functions or values to be lost or degraded as identified by the department. This determination may be based on the department's or the Department of Inland Fisheries & Wildlife's evaluation of the project, which may include an evaluation of appropriate information from other sources.

(2) Types of compensation. Compensation may include one or more of the following methods.

(a) A compensation project may be required by the department. Habitat compensation may include the restoration, enhancement or preservation of in-kind significant wildlife habitat or uplands or wetlands adjacent to such habitat. The site of the compensation project must provide significant wildlife habitat functions that might otherwise be degraded by unregulated activity, be located within the affected habitat or within similar habitat located within close proximity to the affected habitat, and the site must be preserved. If habitat priorities have been established at a local, regional or state level, the applicant shall consider those priorities in devising a compensation plan. Directional buffers may also be used in some instances to off-set impacts.

(b) In lieu of a compensation project, wholly or in part, payment of a compensation fee into the "Natural Resources Mitigation Fund" may be allowed by the department. The department is authorized to develop an in lieu fee compensation fee program for use in cases of impacts to certain types of significant wildlife habitat. See 38 M.R.S.A. § 480-Z(3).

(3) Compensation amounts. The amount of compensation required to replace lost functions depends on a number of factors including: the type of habitat to be altered; the size of the alteration activity; the functions of the habitat to be altered; and the type of compensation to be used. Compensation as described in Section 3(D)(2)(a) must meet the following ratios of square footage or acreage at a minimum (area restored, enhanced, created or preserved/area impacted), unless the department finds that a different ratio is appropriate to directly off-set habitat functions to achieve an equal or higher net benefit for habitat:

(a) 2:1 for restoration, enhancement, or creation;

(b) 8:1 for preservation, including adjacent upland or wetland habitat.

(4) Waiver. The department may waive the requirement for an assessment of habitat functions and values, compensation, or both. The department may waive the requirement for an assessment of the habitat if the department already possesses the information necessary to

determine the functions and values of the area proposed to be altered. The department may waive the requirement for compensation if it determines that the impact to habitat functions and values from the activity will be insignificant.

E. **Seasonal factors.** When determining the significance of a wildlife habitat or impact from a proposed activity, seasonal factors and events that temporarily reduce the numbers and visibility of plants or animals, or obscure the topography and characteristics of a habitat such as a period of high water, snow and ice cover, erosion event, or drought are taken into account. Determinations may be deferred for an amount of time necessary to allow assessment of the resource without such seasonal factors.

4. **Pre-application and pre-submission meetings**

A. **Purpose.** The pre-application meeting between the applicant and the department is an opportunity for the applicant to determine the statutory and regulatory requirements that apply to a specific activity. The purpose of this meeting is to identify issues, processing times, fees and the types of information and documentation necessary for the department to properly assess the activity. The pre-submission meeting is an opportunity to review the assembled application to ensure that the necessary types of information have been included prior to filing the application.

NOTE: Activities requiring an NRPA permit are described at 38 M.R.S.A. § 480-C. Exemptions are described at 38 M.R.S.A. § 480-Q.

B. **Submissions and scheduling.** The following information and items must be submitted prior to scheduling a pre-application meeting with the department.

(1) Sketch plan. A sketch plan of the site showing the proposed activity, adjacent structures and features, property lines, and the significant wildlife habitat, with all distances and dimensions approximately to scale.

(2) Location map. A map showing the location of the proposed project site in relation to major roads and landmarks.

(3) Description of activity. A brief description of the activity including its dimensions.

(4) Description of significant wildlife habitat. A description of the significant wildlife habitat to be altered.

(5) Description of probable impacts. A description of probable impacts of the activity on the subject wildlife, significant wildlife habitat, and any other protected natural resources.

(6) Photographs. Photographs of the project area showing its characteristics.

5. **Submission requirements.** The applicant shall submit evidence that affirmatively demonstrates that the activity will meet the standards of the NRPA and this chapter including, but not limited to, the information listed below. Because of the site-specific nature of activities and potential impacts to significant wildlife habitat, the department may, on a case-by-case basis, require more or less information than specified in this section in order to determine whether the standards will be met.

Y. **Subcatchment.** An area of a project site with a unique flow path to a specific point.

Z. **Two (ten, twenty-five)-year, 24-hour storm.** A precipitation event with a 50% (for two-year), 10% (for ten-year), or 4% (for 25-year) probability of being equaled or exceeded during any twenty-four hour period during any given year.

AA. **Watershed.** The land area that drains, via overland flow, drainageways, waterbodies, or wetlands to a given waterbody or wetland.

BB. **Wetlands.** Coastal and freshwater wetlands as defined in the Natural Resources Protection Act, 38 M.R.S.A. § 480-B.

4. **Stormwater standards.** This section describes the stormwater standards that apply to a project disturbing one acre or more, or to a modification of any size as described in Section 16 of this chapter. There are six categories of stormwater standards: basic, general, phosphorus, flooding, urban impaired stream, and other. More than one standard may apply to a project. In this situation, the stricter standard is applied as determined by the department. For example, a project may be located in a stream watershed, and the stream may drain to a lake. The standards for the particular stream and lake are compared, and the stricter standard is applied as determined by the department.

A. **Basic standards**

(1) When the basic standards must be met. A project disturbing one acre or more must meet the basic standards. Basic standards are specified in Appendices A, B, and C of this chapter and address erosion and sedimentation control, inspection and maintenance, and housekeeping, respectively.

A project qualifies for a stormwater permit by rule (PBR) described in Section 7, and therefore need only meet basic standards, if it results in one or more acres of disturbed area and the following.

(a) Lakes most at risk and urban impaired streams. Less than 20,000 square feet of impervious area and 5 acres of developed area in the direct watershed of a lake most at risk or urban impaired stream; and

(b) All other watersheds. Less than one acre of impervious area and five acres of developed area in any other watershed.

(2) Grading or other construction activity. Grading or other construction activity on any site disturbing one acre or more may not impede or otherwise alter drainageways to have an unreasonable adverse impact on a protected natural resource.

B. **General standards.** General standards apply as described below in addition to the basic standards described in Section 4(A).

(1) When general standards must be met. A project disturbing one acre or more and resulting in any of the following must meet the general standards described below in Section (4)(B)(2).

(a) Urban impaired streams. 20,000 square feet or more of impervious area, or 5 acres or more of developed area, in the direct watershed of an urban impaired stream; or

(b) Other stream, coastal and freshwater wetland watersheds. One acre or more of impervious area, or 5 acres or more of developed area, in any other stream, coastal, or wetland watershed.

Some projects in lake watersheds have the option to meet general standards in lieu of the phosphorus standards as described in Section 4(C) below.

(2) Description of general standards. To meet the general standards, a project's stormwater management system must include treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. This must be achieved by using one or more of the following methods to control runoff from no less than 95% of the impervious area and no less than 80% of the developed area that is impervious or landscaped. Where treatment of 95% of the impervious area is not practicable, the department may allow treatment on as low as 90% of the impervious area if the applicant is able to demonstrate that treatment of a greater depth of runoff than specified in the standards will result in at least an equivalent amount of overall treatment for the impervious area.

The department may, on a case-by-case basis, consider alternate treatment measures to those described in this section. An alternate treatment measure must provide at least as much pollutant removal as the treatment measures listed below and, unless otherwise approved by the department, as much channel protection and temperature control.

If a project is not in an urban impaired stream watershed, the department may allow the portion of a project's impervious or developed acreage that must be treated to be reduced through mitigation by eliminating or reducing an off-site or on-site impervious stormwater source (see Section 6(B).

NOTE: The department strongly encourages applicants to incorporate low-impact development (LID) measures where practicable. LID addresses avoidance of stormwater impacts by minimizing developed and impervious areas on the project site. LID project design considers the location of any protected natural resources, and maintaining natural drainage patterns and pre-construction time of concentration. If practicable, LID incorporates runoff storage measures dispersed uniformly throughout a site rather than single point collection of stormwater through conventional end-of-pipe structures.

(a) Wetpond with detention above the permanent pool. A stormwater management system using detention to control runoff must detain, above a wetpond's permanent pool, a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area. If located within a stream watershed, a pond needs to discharge through an underdrained gravel outlet. A wetpond must have a storage volume below the permanent pool elevation at least equal to 1.5 inches times the subcatchment's impervious area plus 0.6 inch times the subcatchment's non-impervious developed area, a mean depth of at least three feet, and a length to width ratio of 2:1 or greater.

(b) Filter. A detention structure using filters to control runoff must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's developed area that is landscaped and discharge it solely through an underdrained vegetated soil filter having a single outlet with a diameter no greater than eight inches, or through a proprietary filter system approved by the department.

(c) Infiltration. A stormwater management system using infiltration to control runoff must retain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's developed area that is landscaped and infiltrate this volume into the ground. Pre-treatment of stormwater must occur prior to discharge to the infiltration area. The infiltration area must minimize discharge of soluble pollutants to groundwater, and must be maintained to assure that its capacity for infiltration and pollutant removal is unimpaired. An infiltration system serving a development regulated under the Site Location of Development Act may be required to meet additional standards.

Infiltration from a stormwater infiltration system is considered *de minimus* and does not require an individual waste discharge license if the standards in Appendix D are met. For definitions and provisions associated with the Waste Discharge program, see 38 M.R.S.A. §§ 413 *et seq.*, and chapter 520 *et seq.* for waste discharge licensing concerns.

All drywells and subsurface fluid distribution systems must be registered with and meet all other requirements of the Department's Underground Injection Control Program.

(d) Buffers. A stormwater management system using buffers to control runoff must meet the design and sizing requirements described in Appendix F.

(3) Exceptions from the general standards. A project is eligible for an exception from the general standards as follows.

(a) Pretreatment measures. A project that includes measures to pretreat runoff to a filter or infiltration system in a department-approved, flow-through sedimentation device may reduce the runoff volume to each treatment measure described in Section 4(B)(2)(b) and (c) by 25%.

(b) Discharge to the ocean, great pond or a major river segment. A project discharging to the ocean, great pond or a major river segment and using a wetpond to meet the general standards is not required to incorporate treatment storage above the wetpond's permanent pool or to install an underdrain. The underdrain may also be omitted from a wetpond when discharging to a wetland if the department determines that filtering and temperature reduction, normally provided by an underdrain, are not necessary for maintaining the functions of the wetland.

(c) A linear portion of a project. For a linear portion of a project, runoff volume control may be reduced to no less than 75% of the volume from the impervious area and no less than 50% of the developed area that is impervious or landscaped, or the runoff volume to each treatment measure described in Section 4(B)(2) above may be reduced by 25%.

(d) A utility corridor or portion of a utility corridor. A utility corridor or portion of a utility corridor that meets the following criteria is not required to meet General standards.

(i) The project or portion of the project does not include impervious area;
(ii) Disturbed areas are restored to pre-construction contours and revegetated following construction;
(iii) Mowing of the revegetated right–of-way occurs no more than once during any twelve month period; and
(iv) A vegetation management plan for the project has been reviewed and approved by the department.

(e) Stormwater Management Law project including redevelopment. For a project requiring a Stormwater Management Law permit that includes redevelopment of impervious area that was in existence as of November 16, 2005 (the effective date of Chapter 500 revisions), the redevelopment of that impervious area is not required to meet General standards provided the department determines that the new use of the existing impervious area is not likely to increase stormwater impacts resulting from the proposed project's stormwater runoff beyond the level of impact already caused by the runoff from the existing impervious area. The requirements of Appendix D must still be met, if applicable.

(f) Site Location of Development Law project including redevelopment. For a project requiring a Site Location of Development Law permit that includes redevelopment of existing impervious area that was in existence as of November 16, 2005 (the effective date of Chapter 500 revisions), redevelopment of that impervious area is required to meet the general standards to the extent practicable as determined by the department. If the department determines that it is not practicable to make significant progress towards meeting the general standards for the redeveloped impervious area, the department may require off-site mitigation within the same watershed as an alternative for stormwater treatment. The requirements of Appendix D must still be met, if applicable.

C. Phosphorus standards.

(1) When the phosphorus standards must be met. The phosphorus standards apply only in lake watersheds. A project disturbing one acre or more and resulting in any of the following is required to meet the phosphorus standards described in Section 4(C)(2) below.

(a) Lake most at risk watersheds. 20,000 square feet or more of impervious area, or 5 acres or more of developed area, in the direct watershed of a lake most at risk, except that an applicant with a project that includes less than three acres of impervious area and less than 5 acres of developed area may choose to meet the general standards rather than the phosphorus standards if the lake is not severely blooming. Severely blooming lakes are a subset of lakes most at risk as listed in Chapter 502.

(b) Any other lake watershed. One acre or more of impervious area, or 5 acres or more of developed area, in any other lake watershed, except that an applicant with a project that includes less than three acres of impervious area and less than 5 acres of developed area may choose to meet the general standards rather than the phosphorus standards.

(2) Description of phosphorus standards. An allowable per-acre phosphorus allocation for each lake most at risk will be determined by the department. The department's determination is based upon current water quality, potential for internal recycling of phosphorus, potential as a cold-water fishery, volume and flushing rate, and projected growth in the watershed. This allocation will be used to determine phosphorus allocations for a project unless the applicant proposes an alternative per-acre phosphorus allocation that is approved by the department. If the project is a road in a subdivision, only 50% of the parcel's allocation may be applied to the road unless phosphorus export from both the road and the lots is subject to this chapter, in which case the entire allocation for the parcel may be applied.

NOTE: For guidance in calculating per-acre phosphorus allocations and in determining if stormwater phosphorus export from a project meets or exceeds the parcel's allocation, see Volume II of the Maine Stormwater Management BMP Manual.

D. Urban impaired stream standard. If required, the urban impaired stream standard applies in addition to the basic standards, general standards and phosphorus standards described in Sections 4(A), (B) and (C).

(1) When the urban impaired stream standard must be met. If a project located within the direct watershed of urban impaired stream or stream segment listed in chapter 502 results in three acres or more of impervious area or 20 acres or more of developed area, requires review pursuant to the Site Law, or is a Site Law modification of any size as described in Section 16 of this chapter, the urban impaired stream standard must be met.

(2) Description of the urban impaired stream standard. A project in the direct watershed of an urban impaired stream must pay a compensation fee or mitigate project impacts by treating, reducing or eliminating an off-site or on-site pre-development impervious stormwater source as described in Section 6(A). Compensation fees must be paid to the department's compensation fund or to an organization authorized by the department pursuant to the Stormwater Management Law, 38 M.R.S.A. § 420-D(11).

(3) Exception for a project including redevelopment. Redevelopment of an existing impervious area is not required to meet the urban impaired stream standard provided the department determines that the new use of the existing impervious area is not likely to increase stormwater impacts in the proposed project's stormwater runoff beyond the levels already present in the runoff from the existing impervious area.

E. Flooding standard. If required, the flooding standard applies in addition to the basic standards, general standards, phosphorus standards and urban impaired stream standards described in Sections 4(A), (B), and (C).

(1) When the flooding standard must be met. If a project results in three acres or more of impervious area or 20 acres or more of developed area, requires review pursuant to the Site Law, or is a modification of any size as described in Section 16 of this chapter, the flooding standard must be met. Stormwater management systems for these projects must detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.

(2) Waiver of the flooding standard. A project is eligible for a waiver from the flooding standard as follows.

(a) Discharge to the ocean, a great pond, or a major river segment. A waiver is available for a project in the watershed of the ocean, a great pond, or a major river segment provided the applicant demonstrates that the project conveys stormwater exclusively in sheet flow, in a manmade open channel, or in a piped system directly into one of these resources. In addition, the department may allow a variance for other rivers, if the department determines that the increase in peak flow from the site will not significantly affect the peak flow of the receiving waters or result in unreasonable adverse impact on a wetland or waterbody.

Prior to requesting a waiver as part of an application, the applicant shall secure drainage easements from any downstream property owners across whose property the runoff must flow to reach the ocean, great pond, or river. The applicant shall also demonstrate that any piped or open-channel system in which the runoff will flow has adequate capacity and stability to receive the project's runoff plus any off-site runoff also passing through the system.

(b) Insignificant increases in peak flow rates from a project site. When requesting a waiver for a project resulting in an insignificant increase in peak flow rates from a project site, the applicant shall demonstrate that insignificant increases in peak flow rates cannot be avoided by reasonable changes in project layout, density, and stormwater management design. The applicant shall also demonstrate that the proposed increases will not unreasonably increase the extent, frequency, or duration of flooding at downstream flow controls and conveyance structures or have an unreasonable adverse effect on protected natural resources. In making its determination to allow insignificant increases in peak flow rates, the department shall consider cumulative impacts. If additional information is required to make a determination concerning increased flow, the department may only consider an increase after the applicant agrees, pursuant to 38 M.R.S.A. § 344-B(3)(B), that the review period may be extended as necessary by the department.

(3) Channel limits and runoff areas. The design of piped or open channel systems must be based on a 10-year, 24-hour storm without overloading or flooding beyond channel limits. In addition, the areas expected to be flooded by runoff from a 10-year or 25-year, 24-hour storm must be designated in the application, and no buildings or other similar facilities may be planned within such areas. This does not preclude the use of parking areas, recreation areas, or similar areas from use for detention of storms greater than the 10-year, 24-hour storm. Runoff from the project may not flood the primary access road to the project and public roads as a result of a 25-year, 24-hour storm.

NOTE: The municipality, the Maine Department of Transportation, or the Maine Turnpike Authority may require a project to meet additional design standards based on the 50-year or 100-year storm. The department recommends that any applicant proposing a project that may cause flooding of a primary access road or public road contact the appropriate entity.

F. **Easements and covenants.** If a project will require specific off-site areas for the control, disposal, or treatment of stormwater runoff, then these areas must be protected from alteration through easements or covenants according to the following standards.

(1) When an easement is required. The applicant must secure easements from affected property owners when any of the following occur on property not owned by the applicant: A project changes the flow type (for example, converting from sheet flow to channelized flow); the flow channel changes; the flow qualifies for a waiver based on an insignificant increase in peak flow rates pursuant to Section 4(E)(2)(b); or the flow causes or increases flooding.

The department may determine that the expected change in flow, channel or impact is so insignificant as to not require an easement under this chapter. The department may require the applicant to provide evidence that such impacts will not occur or, if they will occur, provide evidence of the extent of the impact and evidence that suitable easements have been obtained.

NOTE: The department's decision to issue a stormwater permit, to require or not require an easement, or to specify the location or width of an easement is not intended to affect other federal, state or local requirements for easements or the availability of legal or equitable remedies for impacts due to stormwater runoff.

(2) Easement specifications and restrictions. The following specifications and restrictions apply to all easements established under this standard.

(a) Land use restrictions. Suitable land-use restrictions must be included in the easements to prevent any activity that might affect drainage to, across, or from the area affected by the easement.

(b) Drainage easements. Drainage easements must include all off-site channels constructed to receive flows from the project and any off-site channels receiving increased peak flow rates from the project. Drainage easements must extend up to, but not include, the channel of any river, stream, or brook accepting flow from the project. Drainage easements must conform with the center line of the drainageway or pipe and must have a minimum width of 30 feet, or 10 feet on each side of the channel or pipe required to accommodate the flow from a 25-year, 24-hour storm, whichever is greater. A reduction in the minimum width may be approved by the department if the full width is not available because of unavoidable physical limitations of the site. However, the minimum width allowed must still be sufficient to avoid an adverse impact on existing uses and to allow access for maintenance and repair.

(c) Flooding easements. Flooding easements must include all off-site areas flooded due to the project's development. These areas include, but are not limited to, those flooded due to the project overloading storm sewers, culverts, stormwater basins, and equivalent utilities with increased runoff; filling existing areas of runoff storage; diverting flows onto off-site properties; and impeding runoff from the project parcel or off-site areas. Flooding easements must conform to the greatest extent of inundation due to the increased runoff from a 25-year, 24-hour storm.

(d) Erosive flows. The flow through the easement or flooding within the easement may not cause erosion of soil or sediment.

(3) Areas conveyed. When the permittee transfers land that contains areas of flow or areas to be flooded as described in (2)(a), (b) and (c), restrictive covenants protecting these areas must be included in any deeds or leases, and recorded at the appropriate county registry of deeds. Also, in all conveyances of such areas and areas containing parts of the stormwater management system, the permittee shall include deed restrictions making the conveyance subject to all applicable terms and conditions of the permit. These terms and conditions must be incorporated by specific and prominent reference to the permit in the deed. All conveyances must include in the restrictions the requirement that any subsequent conveyance must specifically include the same restrictions unless their removal or modification is approved by the department. These restrictions must be written to be enforceable by the department, and must reference the permit number.

(4) Buffers. Buffers must be protected from alteration through deed restrictions or conservation easement to which the department is a party.

NOTE: Suggested templates for deed restrictions and conservation easements for use under the Stormwater Management Law can be found in Appendix G of this chapter.

5. **Other applicable standards.** The following standards apply to a project as described in this section in addition to the basic, general, urban impaired stream, and flooding standards.

A. **Management of stormwater discharges.** A project discharging concentrated stormwater runoff through an open-channel or pipe to any point that is not an open channel, an inlet to a storm drain system, or a natural or man-made impoundment must convert the concentrated flow to sheet flow to prevent erosion of the downstream receiving area. The conversion of concentrated flow to sheet flow must be done using properly designed level spreaders meeting the criteria below.

(1) Discharge to a level spreader. The peak stormwater flow rate to a level spreader due to runoff from a 10-year, 24-hour storm must be less than 0.25 cubic feet per second (0.25 cfs) per foot length of level spreader lip.

(2) Drainage area. The maximum drainage area to the spreader may not exceed 0.10 acre per foot length of level spreader lip.

(3) Length of level spreader. The level spreader length may not be more than 25 feet unless approved by the department.

(4) Siting of level spreader. The level spreader must be sited so that flow from the level spreader will remain in sheet flow until entering a natural or man-made receiving channel.

This standard is not applicable for level spreaders discharging runoff to vegetated buffers used to meet the general standards. Requirements for these level spreaders can be found in Appendix F.

B. **Discharge to freshwater or coastal wetlands.** Stormwater standards for the waterbody must be met before the stormwater enters a wetland, unless otherwise approved by the department or unless the affected area of wetland qualifies for an exemption pursuant to the Natural Resources

Protection Act, 38 M.R.S.A. § 480-Q(17). Wetlands must receive stormwater in the same manner as before the project unless otherwise approved or required by the department. In general, new or increased stormwater discharges into wetlands must be put into sheet flow using level spreaders designed to meet the requirements in Section 5(A). The department may allow alternate stormwater treatment measures if those measures will not unreasonably adversely affect the wetland.

The discharge of runoff to a wetland due to a 2-year storm may not increase the mean storage depth within a wetland more than two inches above pre-development levels for more than 24 hours from the end of the storm event, unless otherwise approved by the department. The department may consider cumulative impacts due to runoff from other projects when applying this standard to any wetland.

C. **Threatened or endangered species.** Additional stormwater standards may apply on a case-by-case basis if the department determines that such standards are necessary to avoid significantly altering the habitat of a threatened or endangered plant or animal species or violating protection guidelines.

NOTE: Title 12 M.R.S.A. § 7755-A prohibits state agencies from issuing a permit that will significantly alter the habitat of any species designated as threatened or endangered species or violate protection guidelines.

D. **Additional controls.** If the department determines that additional controls are necessary to avoid an unreasonable impact on any wetland or waterbody due to pollutants that are not adequately addressed by the standards described in Sections 4 and 5, a stormwater project that results in three acres or more of impervious area or 20 acres or more of developed area, requires review pursuant to the Site Law, or is a modification of any size as described in Section 16 of this chapter may be required to use additional controls. This is a case-by-case determination based upon factors such as the size, nature and intensity of the development, characteristics of the affected natural resource, topography and soils.

For example, stormwater from a metallic mineral mining or advanced exploration activity regulated under the department's regulations, Metallic Mineral Exploration, Advanced Exploration and Mining regulations (06-096 CMR 200), may contain contaminants, such as high concentrations of dissolved metals, or be very acidic or alkaline, for which stormwater best management practices (BMPs) for other commercial or industrial developments do not provide adequate treatment.

E. **Authorization for discharges to public storm sewer systems.** If runoff from a project site will flow to a publicly-owned storm sewer system, then the applicant must obtain authorization from the system's owner to discharge into the system. At its discretion, the department may require the applicant to demonstrate that the system has adequate capacity for any increases in peak flow rates and volumes to the system.

6. **Compensation fees and mitigation credit.** The following applies to projects required to provide mitigation, pursuant to Section 4(D), or where the Department has allowed the applicant to reduce the acreage treated or lower the phosphorus export reduction required to meet the phosphorus standards in Section 4(C) through mitigation. Mitigation eliminates or reduces other off-site sources or pre-development on-site sources, in accordance with the requirements of Sections 6(A) through